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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,544	12/21/2001	Masashi Nakashita	2038-282	3584

7590 09/20/2005

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EXAMINER

REICHLE, KARIN M

ART UNIT	PAPER NUMBER
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3761

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/024,544	NAKASHITA, MASASHI	
	Examiner	Art Unit	
	Karin M. Reichle	3761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 21-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In light of the petition decision of 3-9-05, the FINAL rendered 8-23-04 is withdrawn. The amendment filed 11-23-04 has been entered and all the claims will be considered on their merits. An action on such amendment follows.

Specification

Drawings

2. The drawings were received on 11-23-04. These drawings are approved.

Description

3. The disclosure is objected to because of the following informalities: In the amendment to page 5, line 6, line 16, “3” should be --2,3--.

Appropriate correction is required.

Claim Objections

4. Claims 13, 21 and 28 are objected to because of the following informalities: In claim 13, last line, after “is” --in the range of-- should be inserted and “in the range of” should be deleted. In claim 21, lines 1-2, i.e. “the...panel and”, appear to be redundant, see lines 6-9 of claim 1 and lines 2-4 of claim 2. Claim 28 also appears to be redundant. See claim 1, lines 6-7 and last section. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. Claims 4, 22, and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 4, the language of line 4 and the last line, i.e. “constitutes...100 wt%” and lines 4-5 and 7-8, i.e. “constitutes”, are inconsistent, i.e. how can the subpanels include some of one fiber when it includes 100 wt% of another fiber? In regard to claim 22, is the flat portion of claim 1 and the area of the one of the opposite sides in this claim one and the same, i.e. how many flat portions at a minimum are required? In claim 26, a positive structural antecedent basis for “said wall portions” should be set forth. Also the rejection of claim 22 also applies to claim 26 with respect to the flat portion and the flat area.

Claim Language Interpretation

6. It is noted that the claim language “a substantially flat portion...subpanel” of claim 1 does not specify the specifics of such portion with regard to the overall subpanel, e.g. thickness, length, width, i.e. can read on a portion of the topsheet facing surface thereof. “Progressive” as defined by the dictionary means “moving forward, advancing, proceeding in steps, continuing steadily by increments”. Therefore, the last subsection of claim 1, i.e. the terminology “progressively”, especially in light of the new Figure 6 which shows one strata of a subpanel of one density and another strata of the subpanel having another density, i.e. not an evenly progressing density from surface to surface, is interpreted as requiring some portion of the first subpanel having an increase in its density toward the second subpanel but does not require the

subpanel within its terminal edges to evenly increase in density from its top surface to its bottom surface. Due to the lack of clarity with respect to claim 4, discussed supra, the subpanels are only required to include 100 wt% of one fiber. Claim 5 as now amended is interpreted to require some SAP but no more than 50 wt%. Claim 21 is interpreted to only further require the second dimension being smaller than the first dimension. Claim 28 is interpreted to not require any structure in addition to that claimed in claim 1. Claim 22 due to the lack of clarity discussed supra is interpreted to have a surface or side adjacent the topsheet which surface or side includes an area which is flat throughout and which area includes the flat portion, i.e. the flat portion is at a side or surface portion adjacent the topsheet. Claim 26 due to the lack of clarity discussed supra is interpreted to require a first subpanel having a side or surface which includes at a minimum two flat areas, at least one of which is also the flat portion as claimed in claim 1, which areas are surrounded by a number of the protuberant portions, i.e. wall portions are not deemed to be required.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1-15 and 21-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harwood '986 in view of Hseih et al '155 and Chen et al '377.

With regard to claim 6, see Claim Language Interpretation section supra, and Harwood at Figures, col. 1, lines 50-62, col. 2, line 12-col. 3, line 54, col. 3, lines 68-74, i.e. the topsheet is 11, the panel is at least 16 and 18, the first subpanel is 16, the second subpanel is at least 18, and

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the protuberances are at least 32. The Harwood device therefore includes all the claimed structure except for 1) a backsheet and 2) the density of the second subpanel being higher than that of the first subpanel. However, with regard to 1) to employ a backsheet as taught by Hsieh on the Harwood sanitary napkin would be obvious to one of ordinary skill in the art in view of the recognition that such is typically employed on a sanitary napkin and the desire of Harwood to use known components, see, e.g., col. 1, lines 50-62 of Harwood and col. 5, lines 11-14 of Hsieh et al. With regard to 2), see col. 2, lines 19-36 of Harwood, i.e. the desire to promote migration from the first panel 16 to the second panel 18. It is noted that it is not claimed that the density of the second subpanel is uniform or is only higher than that of the first subpanel. See also, e.g., Figures 2 or 13, col. 27, lines 10-11, col. 27, line 54-col. 28, line 3 and col. 38, lines 27-46 of Chen et al, i.e. second subpanel in contact with protrusions of first subpanel has higher density to promote migration of fluids therebetween. To employ a second subpanel having a higher density than the first subpanel as taught by Chen et al on the Harwood device would be obvious to one of ordinary skill in the art in view of the recognition that such would promote migration of fluids therebetween and the desire of Harwood for such migration.

With regard to claim 7, the wall portions are 40, see Figures. Applicants further claim specific densities of the second subpanel in combination with those of the protuberant portions and wall portions. Note col. 38, lines 32 and 33 of Chen et al, i.e. the density of the first subpanel would be less than or about 0.2 g/cc. The prior art combination teaches a compression resistant first subpanel in which a second subpanel having a density higher than that of the first subpanel which subpanel includes protrusions and wall portions to promote migration of body fluid in the z-direction rather than the lateral direction. Since the general conditions of claim 7

are disclosed in the prior art it is not inventive to discover the optimum or workable ranges, i.e. the specific densities claimed in claim 7, by routine experimentation, see *In re Allen et al*, 105 USPQ 233.

With regard to claim 8, the surface is that shown in Figure 03 adjacent the topsheet 11. As shown in the Figures such surface is flat throughout an entire area thereof, e.g. outside 30 and/or between 32. It is noted that the entire surface of the panel encompassed by the periphery is not claimed as being flat.

With regard to claim 9, the base portion is the structure defining the surface discussed in claim 8, e.g. portions of the top sheet of creped tissue, see col. 2, lines 12-13 and col. 3, lines 68-72 of Harwood. The fiber density of the protuberant portions is higher than that of the base portion, see col. 2, line 26-col. 3, line 33, i.e. at the very least a portion of the protuberant portions, e.g. adjacent 34, is higher than that of at least a portion of the base portion, e.g. the top layer of the portion 42. The fiber density of the protuberant portions is lower than that of the second panel, see discussion of claim 7 supra. It is noted that the claim does not require the density of the entire protuberant portions be higher than that of the base portion, or that of the entire base portion, or any specific portion of the protuberant portions being higher than that of the base portion.

In regard to claim 10, the wall portions are 40. The fiber density of the wall portions is higher than that of the base portion, see col. 2, line 26-col. 3, line 33, i.e. at the very least a portion of the wall is higher than that of at the very least a portion of the base portion, e.g. the top layer of 42. The fiber density of the protuberant portions is lower than that of the second panel, see discussion of claim 7 supra. It is noted that the claim does not require the density of the

entire wall portions be higher than that of the base portion or that of the entire base portion, or any specific portion wall portions being higher than that of the base portion. The claim also does not require any specific density relationship between the protuberant portions and the wall portions, i.e. can be the same.

In regard to claim 11, the areas are central portions of the area 30, e.g. in Figure 3, the opposite surface of portions of the top layer between four adjacent structures 32, i.e. those areas are surrounded by those protuberances and protuberances/wall portions outside such innermost protrusions. It is noted that the areas are not claimed of a certain size or shape. It is further noted that in light of the specification, the terminology “completely surrounded” is interpreted to mean completely surrounded in the x-y plane not the z plane.

In regard to claims 12-14, see discussion of claims 9, 7, and 10 supra.

In regard to claim 15, for the purposes of this claim, the protuberant portions are 32 and 42.

With regard to claims 1-2 and 28, see Claim Language Interpretation section supra, and Harwood at Figures, col. 1, lines 50-62, col. 2, line 12-col. 3, line 54, col. 3, lines 68-74, i.e. the topsheet is 11, the panel is at least 16 and 18, the first subpanel is 16, the second subpanel is at least 18, the first subpanel flat portion, when wall portions are also claimed, is 16 between 32 on the topsheet facing side or surface of 16, i.e. the surface of the topmost layer of crepe, see portions cited in the discussion of claim 8 supra, and when wall portions are not claimed, could be or also could be portions 40, the protuberances are at least 32, when wall portions are claimed 40 defines such portions, see both Figures 2 and 4, the fiber density of the first subpanel increases towards the second subpanel, see col. 2, line 26-col. 3, line 33, especially col. 3, lines

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26-33, col. 3, lines 1-10 and col. 2, lines 26-28 and 42-47 (the density of the areas 34 is higher than that of the surface of 40 or 42 adjacent the topsheet 16). The Harwood device therefore clearly includes all the claimed except for 1) a backsheet and compressive restoring elasticity as claimed in claim 1, 2) the density of the second sub panel being higher than that of the first subpanel as claimed in claim 1 and 3) the fiber density of the first subpanel having a fiber density increasing progressively toward the second subpanel. However, with regard to 1), i.e. the backsheet, and 2), see discussion of claim 6, supra. With regard to 1), i.e. the compressive restoring elasticity, also see Hseih et al at Figures, col. 3, lines 31-45, col. 3, line 61-col. 4, line 5, col. 5, lines 8-14, col. 7, lines 16-20, i.e. sanitary napkin with two subpanels, one subpanel having embossments, which one subpanel can be cellulosics or thermoplastic synthetic resin fiber and be any thickness such that the panel is resistant to wet collapse when simultaneously subjected to compressive forces and fluid, i.e. has a “compressive restoring elasticity” (see also paragraph bridging pages 10-11 of the instant application). To make the first subpanel of any number of cellulosic sheets as taught by Harwood a first subpanel of hydrophilic thermoplastic synthetic resin fiber and a thickness such that the panel is resistant to wet collapse instead would be obvious to one of ordinary skill in the art in view of the interchangeability as taught by Hseih et al. With regard to 3), it is the Examiner’s first position that the fiber density of Harwood increases progressively toward the second subpanel, see Claim Language Interpretation section and portions of Harwood supra, i.e. the density of the areas 34 is higher than that of the surface of 40 or 42 adjacent the topsheet 16 and/or at least the portion of 40 facing the second subpanel has a lower fiber density than the portion of 34 contacting the second subpanel. In any case, the Examiner’s second position, Harwood teaches that it is well known that fluid migrates more

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rapidly through denser areas, that fluid is intended to migrate downwardly in the portions 34 and that the depressions are created by compacting the fibers in the direction of the second subpanel, i.e. the number of fibers per unit area at the bottom of 34 is greatest. Therefore, to make the fiber density of the first subpanel increase progressively toward the second subpanel, if not already, on the Hargrove device would be obvious to one of ordinary skill in the art in view of the recognition that such density gradient is known to promote the migration of fluid in a certain direction, i.e. downwardly, and the desire of Harwood to migrate fluids downwardly.

In regard to claim 21, see Claim Language Interpretation section *supra* and Figure 2 and col. 3, lines 41-47 of Harwood.

In regard to claim 25, see col. 3, lines 23-33, e.g. at the very least the top layer of crepe tissue at 42 which is flat has a fiber density less than at least a portion of the wall portion 40. Also see discussion of claims 7 and 10 *supra*.

In regard to claim 3, Applicants claim specific densities of the second subpanel in combination with those of the flat portion and those of the protuberant portions and wall portions. Note col. 38, lines 32 and 33 of Chen et al, i.e. the density of the first subpanel would be less than or about 0.2 g/cc. The prior art combination teaches a compression resistant first subpanel in which the flat portion has a lower fiber density than that of the protuberant portions and the wall portions, a first subpanel with an increasing fiber density toward the second subpanel and a second subpanel having a density higher than that of the first subpanel to promote migration of body fluid in the z-direction rather than the lateral direction, see discussion *supra*. Since the general conditions of claim 3 are disclosed in the prior art it is not inventive to discover the optimum or workable ranges, i.e. the specific densities claimed in claim 3, by routine

experimentation, see *In re Allen et al*, 105 USPQ 233. It is noted that the densities of the base protuberant and wall portions can all be 0.05-0.10 g/cm³ in some portion as claimed.

With regard to claim 4, it is noted that the claim does not require a combination of cellulose fiber and synthetic resin fiber, i.e. can be all synthetic as taught by Hsieh et al.

With regard to claim 5, Applicant now claims the second subpanel including a superabsorbent polymer of fibrous or granular form up to 50 wt%. However, see Harwood at col. 2, lines 19-25, i.e. can be any fluid absorbent material. Also see Hsieh at col. 6, lines 1-23, i.e. combination of cellulosic materials and SAP, i.e. less than 100%, and also thereby '492 at col. 3, lines 10-42 and col.4, lines 33-35, e.g. SAP coated rayon fibers, i.e. fibrous SAP which forms at most 25% of core, and '419 at col. 2, lines 55-57 and col. 4, lines 48-55, i.e. SAP of granular or fibrous form incorporated in fibrous core. To employ the fluid absorbent core as taught by Hsieh, i.e. a second subpanel comprising at least one of fibrous or granular SAP of no more than 50 wt%, on the Harwood sanitary napkin would be obvious, see *In re Siebentritt*, 54 CCPA 1083(two equivalents are interchangeable for their desired function, express suggestion of desirability of substitution not needed to render such substitution obvious).

In regard to claim 22, see discussion of claim 8 supra.

In regard to claim 23, as discussed supra, since wall portions are not required, the flat portion could be considered 40.

In regard to claim 24, see, e.g., discussion of claim 9 supra.

In regard to claim 26, see Claim Language Interpretation section supra. The flat areas could be 40 or see discussion of claim 11 supra.

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In regard to claim 27, see discussion of claim 15 supra and Claim Language Interpretation section supra.

Response to Arguments

9. Applicant's remarks have been considered but are either deemed moot in that the issue(s) discussed has/have not been repeated or are deemed not persuasive for the reasons set forth supra, e.g. such are narrower than the prior art rejection, the teachings of Harwood and the claim language.


Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karin M. Reichle whose telephone number is (571) 272-4936. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tanya Zalukaeva can be reached on (571) 272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Karin M. Reichle
Primary Examiner
Art Unit 3761

KMR
September 18, 2005